

Division 38

Observational Systems

Strategic Plan

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Approved:

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OVERVIEW

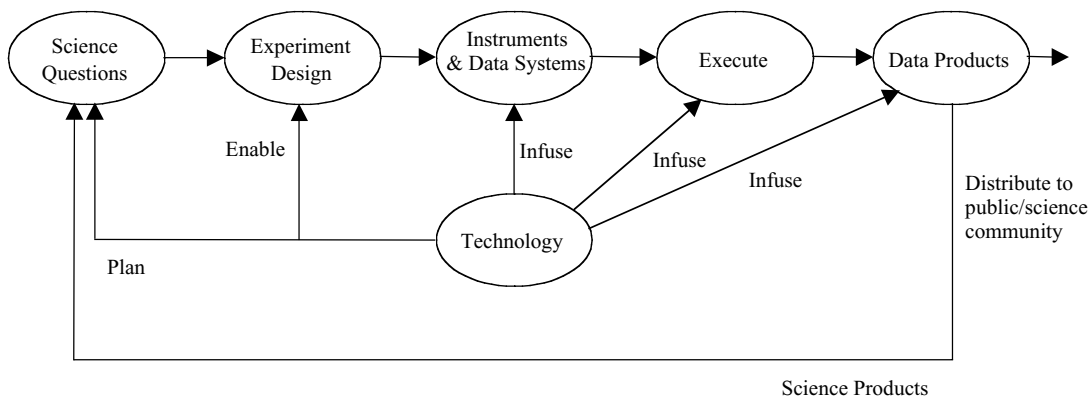
Division 38 Vision Statement:

**Invent new technology,
Create new instruments,
Deliver new science.**

Division 38 Primary Role Statement :

Conceive and implement science experiments and deliver data products ,

where science experiment encompasses the process of starting with fundamental science questions posed by our science partners and working through the phases of experiment design, instrument and data systems design/implementation, mission execution, generating/archiving science data products, and developing the technology to be infused into these phases as shown in the figure below.



Within the Observational Systems Division, we have more than a 35-year history of successfully building and flying scientific experiments. We pioneered remote sensing instruments and data processing for planetary exploration and have used those capabilities to extend the division 's participation into earth science and astrophysics. As the space program continues to evolve, the division will evolve to meet the future needs of our science partners for spaceborne science experiments, including in-situ experiments.

This strategic plan is intended to provide a framework for focusing our efforts towards a future that is successful as our past. It was developed after extensive study of our internal and external relationships. By looking toward the future, we will be positioned to take advantage of the opportunities that will develop.

Six high-level *goals* are addressed in this strategic plan:

- Science
- Business Development
- Commitments
- People
- Technology
- Infrastructure (D38)

For each goal, the *strategies* and *actions* required to achieve the goal and the *metrics* to measure how well we are doing in meeting the goal are identified.

GOAL 1: Science

THE GOAL:

We will proactively infuse science into all phases of conceiving and implementing world-class science experiments and data products.

Strategy :

Revitalize our interfaces and collaborations with the internal and external science communities through the creation of a division scientist position and a science liaison team.

Actions:

1. Become actively engaged with our scientist customers through participation on pre-project science planning, mission study, architecture, roadmap and proposal teams.
2. Facilitate and encourage attendance and presenting at scientific, engineering and technical conferences/workshops.
3. Instill in all members of the division the fact that the science community is our primary customer. Solicit science customer feedback on division performance.
4. Sponsor workshops focused on specific proposal opportunities which provide a forum for innovation and collaboration between scientists and technologists. Invite scientists interested in proposing, and work with them to design experiments to achieve their science objectives.

Metrics:

1. Division scientist and science liaison team (lead by division scientist) on staff and active.
2. Track participation on pre-project science planning, mission study, architecture, roadmap, and proposal teams, and in scientific meetings.
3. Track participation in scientific, engineering and technical conferences/workshops, including papers presented, displays exhibited, and program committee membership.
4. Measure science customer feedback on division performance.
5. Maintain record of new and continuing science partnerships and joint proposals submitted, both successful and not. Determine ratio of successful proposals to those submitted.
6. Number of division-sponsored proposal-focused workshops held.

GOAL 2: Business Development

THE GOAL:

We will develop and maintain a relevant business base by working with the JPL program offices and supporting an appropriate mix of mature and new technologies/capabilities to a) enable future science missions and instruments and b) ensure a stable working environment for our people.

Strategy:

Develop new customers and new business with existing customers, emphasizing strategically targeted business lines while still supporting a broad, diverse business base including low TRL technology development efforts.

Actions:

1. Convene a special meeting of the division management team on a semi-annual basis to review and update the list of targeted business areas to be emphasized in the implementation of this Strategic Plan.
2. Form a division business development team consisting of our program office representatives to identify key business opportunities, including partnering opportunities with other divisions or organizations on or off lab, communicate them to the appropriate division personnel, and aggressively pursue new work in our targeted areas.
3. Showcase division s capabilities both at JPL and elsewhere including key conferences and major meetings of relevant science, engineering and technology societies.
4. Develop a division proposal team to mentor and assist proposal managers and PI s in preparing, reviewing and submitting excellent proposals to potential customers and winning new work.
5. Identify sources of funds, acquire and allocate them to enable the accomplishment of business development actions.

Metrics:

1. Total dollar value of new business developed in the division.
2. Total number of technology development and RTOP proposals won by the division and our partner.
3. Number of capability showcasing opportunities exercised.
4. Number of proposals submitted and success ratio.

5.

GOAL 3: Commitments

THE GOAL:

We will manage our commitments to be delivered on time, within cost, and meet or exceed our customer's expectations.

Strategy :

Assure that an unambiguous and up-to-date statement of work, schedule, cost plan, and de-scope plan exists for each of our commitments. Provide timely reporting to the customer with insight on progress versus planned activities, problems encountered and their resolution plans, and depletion of schedule and cost reserves.

Actions:

1. Confirm that Work Agreements (or Technology Development Agreements for technology tasks), approved by line and project management, exist for all of our current commitments; take immediate steps to rectify any "gaps" which exist. Look for gaps at MMRs, quarterly reviews, and other appropriate line management processes established to assure quality, completeness, and timeliness of our commitments. Maintain a list of unapproved Work Agreements and the number of weeks each item has remained open.
2. Section managers schedule or verify that documented reviews of progress vs. plans are held monthly, quarterly, or biannually to insure that appropriate task oversight is taking place. Maintain a "Green/Yellow/Red" visual aid for tracking technical, cost, and schedule status for each commitment.
3. Employ a "technical specialists support group" concept, which embraces the rapid assemblage and deployment of technical experts to assist our task managers when metrics show an impending threat to a major commitment.
4. Establish better tools/support for cost estimating; improve the line management validation process of our cost estimates.
5. Provide training for our people, including support staff, on writing and maintaining good Work Agreements, Technology Development Agreements, monthly progress reports, and review products.

Metrics:

1. Number of open or obsolete Work Agreements verses time.
2. Semi-annual report card from HQs and feedback from our internal and external customers, including ECAP inputs.

GOAL 4: People

THE GOAL:

We will acquire and nurture a competent, motivated, informed, and diverse workforce appropriate to our business.

Strategy 1 Communications:

Develop and implement a communications plan for informing and engaging our employees.

Actions:

1. Hold an annual all-hands, State of the Division meeting.
2. Division manager and deputy meet with groups and section staffs.
3. Conduct an annual briefing for all new-to-the-division employees, whether new-hires or transfers.

Metrics:

1. Number of employee contacts.

Strategy 2 Acquire and Mentor:

Strengthen the Division's future through strategic hiring practices and employee mentoring activities.

Action:

1. Increase our participation in HR programs to hire new grads, post docs, co-op students, and in summer employment programs by identifying and creating jobs appropriate for these categories and participating in appropriate recruiting trips.
2. Work with International Affairs to actively facilitate hiring of Foreign Nationals.
3. Plan to have one-third of the new hires be fresh outs.
4. Develop and implement a principals as gurus activity.
5. Participate in the Technical Leadership Program.

Metrics:

1. Absolute and change in number of each category employed.
2. Number of recruiting trips taken by line managers.
3. Number of sponsored interviews from recruiting trips.
4. Track ratio of new hires to total hires.

5. Number of formal and informal mentoring relationships.
6. Number of participants in the Technical Leadership Process.

GOAL 5: Technology

THE GOAL:

We will leverage technology to insure the capture of new instrument and information system business.

Strategy:

Align our technology developments to support future NASA needs and infuse technology developed internally or by other organizations.

Actions:

1. Construct an inventory of all technology tasks and link to each other and to long range laboratory goals through inclusion in Technology Community Leaders (TCL) roadmaps.
2. Identify a science advocate for each division technology development task.

Metrics:

1. Number of division developed technologies that get inserted into instruments or information systems either at the Laboratory or external to the Laboratory.
2. Number of division developed technologies that are incorporated into technology affiliates tasks.
3. Number of division developed technologies that show up in future proposals.

GOAL 6: Infrastructure

THE GOAL:

We will provide the resources and working environment which facilitate exposure to new scientific challenges, the conceptualization and development of new technologies and experiments, and the ongoing professional development necessary for maintenance of a highly skilled population.

Strategy 1:

Provide suitable laboratory facilities and equipment for timely, high quality technology and instrument development.

Actions:

1. Forecast future needs for sufficient laboratory space for technology and instrument development, test, and calibration. Periodically track facilities usage forecast lists and spreadsheets for accuracy and credibility as well as timeliness of the section inputs. For division management review and action, highlight on a quarterly basis the projected needs for which facilities and/or equipment are or are not forecasted to be available. Assess facility usage and equipment storage practices quarterly.
2. Seek additional facility space and work with other technical divisions to find and implement solutions to facility needs in a timely manner.

Metrics:

1. Quarterly progress report listing facilities and equipment needs met and not met.

Strategy 2:

Take advantage of integrated design and simulation tools and DNP services to streamline the design, implementation and test of division products.

Actions:

1. Assess and build on the current Team I capability; increase integration of design tools.
2. Survey the tools currently used by the division and the available DNP tools, capabilities, and services; integrate into our division's processes where appropriate.

Metrics:

1. Increase in tool utilization by the division.

Appendix : Acknowledgements

A Strategic Plan Working Group was formed subsequent to the division management retreat held in February 2000 to assure that a strategic plan would be generated in a timely manner to guide our Division in achieving its vision and primary role. The working group members were:

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